

REMARKS

Entry of this Amendment After Final Rejection is respectfully requested. This Amendment does not raise any new issues or require any new searching by the Examiner. Furthermore, it is believed that upon entry of this Amendment, the application will be in condition for allowance. Accordingly, entry of this Amendment and reconsideration in light thereof are respectfully requested.

In the Final Office Action of February 17, 2004, the Examiner rejected claims 20-23, 27, 29, 33-36, 39, 41-43, 45, and 49 under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 6-16767. Applicants have obviated these grounds for rejection with the claim amendments and arguments presented below.

Firstly, Applicants have amended claims 20, 27 and 42 to make it clear that Formula IIA is limited to phosphate plasticizers containing a branched chain alkyl group, which would preclude octyldiphenyl phosphate. In the Final Office Action, the Examiner stated that octyldiphenyl phosphate is considered to encompass ethylhexyldiphenyl phosphate, based on page 493 of Sax et al. Applicants respectfully disagree with the Examiner's characterization of Sax et al. Sax et al. defines 2-ethylhexyl as:

“An 8-carbon radical of the formula $\text{CH}_3(\text{CH}_2)_3\text{CH}(\text{C}_2\text{H}_5)\text{CH}_2-$. Many of its compounds were formerly called octyl.” (Emphasis added)

Thus, this particular edition of Sax et al., which was published in 1987, admits that “octyl” is an obsolete term of art for branched radicals such as 2-ethylhexyl. This is consistent with Applicants’ understanding of modern chemical usage, wherein an alkyl group defined as “octyl” should be assumed to be a straight-chain in the absence of a specific indication to the contrary. JP 6-16767 was filed in 1991 and published in 1994. Accordingly, “octyldiphenyl phosphate” in

JP 6-16767 should not be read to encompass 2-ethylhexyl diphenyl phosphate. Instead, JP 6-16767 should be read consistently with modern chemical usage to disclose a straight chain radical. Accordingly, the compositions claimed in the present application are novel, and the rejection under 35 U.S.C. 102(b) should be withdrawn.

Alternatively, the Examiner rejected claims 20-23, 27, 29, 33-36, 39, 41-43, 45, and 49 under 35 U.S.C. 103(a) stating that it would have been obvious to substitute one isomeric diphenyl phosphate plasticizer for another, given that one would have expected the isomeric plasticizers to function as equivalents. Applicants respectfully disagree with the Examiner. It is Applicants' position that plasticizers containing branched chain groups confer unexpected and superior properties to the compositions of the invention compared to plasticizers containing straight chain alkyl groups. This selection is intimately connected with the claim limitation that the plasticizer must have a vapor pressure of less than 100 mPa at 25°C. Compounds containing long-chain branched alkyl groups have a vapor pressure lower than compounds containing corresponding straight-chain alkyl groups. The prior art does not disclose or suggest the importance of vapor pressure in the selection of a phosphate plasticizer, nor the value of selecting phosphates containing branched-chain alkyl groups rather than straight-chain alkyl groups. Thus, the cited prior art does not render obvious claims 20-23, 27, 29, 33-36, 39, 41-43, 45, and 49, and withdrawal of the rejection under 103(a) is respectfully requested.

In addition, Applicants have amended claim 33 to clarify that the process is performed at room temperature without the application of external heat. The cited prior art teaches that the methods are carried out with heating, and does not disclose or suggest that the process could be carried out at room temperature without external heat. It is clear that where 30°C is mentioned in JP 6-16767, it is envisioned that heat would be applied to reach this temperature. Applicants

respectfully disagree with the Examiner's assertion that the elevated temperature RIM process of JP 6-16767 is equivalent to Applicant's room temperature casting process, and that it would have been obvious to reduce the RIM processing temperature of JP 6-16767. These statements constitute impermissible hindsight, as JP 6-16767 does not teach or suggest that the RIM process disclosed therein may be adapted for room temperature casting.

Finally, the Examiner rejects claims 20-32, 37, 38, 40, 44 and 46-48 under 35 U.S.C. 103(a) as being unpatentable under JP 6-16717 in view of Singh et al. ('371) and further in view of Rizk et al. ('860), Peter ('258) and Gabbard et al. ('956). Applicants respectfully disagree for the reasons given on page 11 in their Amendment and Response under 37 C.F.R. § 1.111, dated September 18, 2003 (which reasons are incorporated by reference herein), and request that this ground for rejection be withdrawn.

In view of the foregoing, it is believed that the present application is now in condition for allowance and a favorable action on the merits is respectfully requested.

The Commissioner is authorized to deduct any fees resulting from this Amendment from
Deposit Account 16-2500.

Respectfully submitted,

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Date: July 16, 2004

By

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Enclosure: Petition for extension of time